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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,036	07/26/2001	Luca Blessent	010097	9922
23696	7590	12/08/2004	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			TRAN, KHAI	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/917,036

Applicant(s)

BLESSENT, LUCA

Examiner

KHAI TRAN

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-24 is/are allowed.
- 6) ☒ Claim(s) 25 and 27 is/are rejected.
- 7) ☒ Claim(s) 26 and 28-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/27/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 27 is objected to because of the following informalities: Appropriate correction is required.

Regarding claim 27, line 5, the term "the output signals" should be --the output signal--.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ha (U.S. Pat. 6,205,189 B1) in view of Kurihara (U.S. Pat. 6,731,703 B2).

Regarding claim 25, Ha discloses a signal processor as shown in Figure 1, comprising: a noise controller (an intermediate frequency amplifier 6 and an automatic gain control (AGC) 12) to scale an input signal such that a constant noise energy level is maintained at the output signal (i.e., in the reception mode, automatic gain control detector 12 generates a control voltage for controlling a gain of intermediate frequency amplifier 6 to maintain a constant level of the received signal (col. 1, lines 58-66); a baseband processor coupled to the output of the noise gain controller adapted to demodulate the output signal (a baseband processor 10 coupled to output of the

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automatic gain controller 12). Ha fails to disclose a use of the baseband processor for demodulating the output signal of the noise gain controller.

Kurihara discloses a demodulator 4 as shown in Figure 1 for demodulating the output signal of the automatic gain controller (AGC) 3. It would have been obvious to one having ordinary skill in the art of the time the invention was made to demodulate the output signal of the automatic gain controller by using the demodulator 4 as taught by Kurihara into the teachings of Ha in order to recover the original signal which was originally modulated.

Claim 27 is similar to claim 25. Therefore, claim 27 is rejected under a similar rationale.

***Allowable Subject Matter***

4. Claims 1-24 are allowed.
5. Claims 26, 28-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: Ha and Kurihara reference fail to disclose a signal processor comprising: a noise estimator having an input coupled to the output of the signal combiner to generate a noise estimate of a signal output from the signal combiner; a noise gain discriminator, characterized by a discriminator transfer function, coupled to the noise estimator to generate a gain correction factor; and an error signal accumulator having an input

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coupled to the noise gain discriminator and an output coupled to the second input of the signal combiner as recited in claims 1, 26, 28.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hardiman et al (U.S. Pat. 5,937,377) disclose a signal pre-processing apparatus.

Riordan et al (U.S. Pat. 6,240,100) disclose a cellular TDMA base station receiver.

Patel et al (U.S. Pat. 6,480,528) disclose an automatic gain controller.

Loke (U.S. Pat. 6,484,042) discloses a secondary automatic gain control loops.

Dehghan (U.S. Pat. 6,556,635) discloses communications receiver having adaptive dynamic range.

Efstathiou (U.S. Pat. 6,504,867) discloses a digital matched filter.

Hart (U.S. Pat. 6,792,055) discloses a data communication receiver.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI TRAN whose telephone number is (571) 272-3019. The examiner can normally be reached on 7:00AM - 4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAY PATEL can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KHAI TRAN  
Primary Examiner  
Art Unit 2637

12/3/2004